National Institute of Standards and Technology
Gaithersburg, MD 20899

National Type Evaluation Program

Certificate of Conformance

for Weighing and Measuring Devices

For:

Jewelers'/Grain Balance
Digital Electronic
Model: GT Series
n_{max}: See page two
Capacity: See page two
Platform: See page two

Accuracy Class: II

Submitted by:

Ohaus Corporation
29 Hanover Road
Florham Park, New Jersey 07932-0900
P.O. Box 900
Tel: (201) 377-9000
Fax: (201) 593-0359
Contact: Randall R. Crosser

Standard Features and Options

Gross\net modes
Semi-automatic zero
Percent weighing
Semi-automatic tare
Cross hatching is used to identify "d" when it is not equal to "e"
The model number is momentarily displayed when the device is turned on
Weight units:

grams	carats
pounds	troy ounces
ounces	pennyweight
grains	

Some of the Standard Features and weight units are selectable from the menu during the set-up of the device.

Options: Printer*
Draft shield

*The Statistics Printout and the Good Laboratory Practices (GLP) parameters are printing options and do not affect the metrological performance of the device; thus, these parameters can be accessed in the Legal For Trade mode.

Before verification by a Weights and Measures Official, the Net Weigh mode must be enabled. Users who do not enable the Net Weigh mode must attach the "Re-zero" label below the key marked "ON" and "->O/T<-".

Temperature Range: 10 to 30 °C (50 to 86 °F)

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Effective Date: July 7, 1994

Chief, Office of Weights and Measures
Issue Date: May 10, 1995

Jewelers'/Grain Balance
Digital Electronic
Model: GT Series

Model	Capacity	n_{max}	**Platform (inches)**	**e**	**d**	**FGIS Category**
GT4100E	4 100 g 9 lb 146 oz 63 000 GN	41 000 18 000 29 200 31 500	6.65 diameter	0.1 g 0.0005 lb 0.005 oz 2 GN	0.01 g	N/A
GT4100DE*	1 000/4 100 g 9 lb 146 oz 63 000 GN	41 000 18 000 29 200 31 500	6.65 diameter	0.1 g 0.0005 lb 0.005 oz 2 GN	0.01 g/0.1 g	N/A
GT4000E	4 100 g 9 lb 146 oz 63 000 GN	41 000 18 000 29 200 31 500	6.65 diameter	0.1 g 0.0005 lb 0.005 oz 2 GN		(No % weighing) General & Moisture
GT2100E	2 100 g 4.6 lb 74 oz 32 000 GN	21 000 9 200 14 800 16 000	6.65 diameter	0.1 g 0.0005 lb 0.005 oz 2 GN	0.01g	N/A
GT410E	410 g 2 020 ct 13 ozt 260 dwt 6 300 GN	41 000 40 400 26 000 26 000 31 500	4.9 diameter	0.01 g 0.05 ct 0.0005 ozt 0.01 dwt 0.2 GN	0.001g 0.001 dwt	Precision Moisture
GT410DE*	100/410 g 2 020 ct 13 ozt 260 dwt 6 300 GN	41 000 40 400 26 000 26 000 31 500	4.9 diameter	0.01 g 0.05 ct 0.0005 ozt 0.01 dwt 0.2 GN	0.001 g/0.01g 0.001 dwt	Precision Moisture
GT400E	410 g 2 020 ct 13 ozt 260 dwt 6 300 GN	41 000 40 400 26 000 26 000 31 500	4.9 diameter	0.01 g 0.05 ct 0.0005 ozt 0.01 dwt 0.2 GN		Precision Moisture
GT310E	310 g 1 550 ct 9.9 ozt 195 dwt 4 784 GN	31 000 31 000 19 800 19 500 23 920	4.9 diameter	0.01 g 0.05 ct 0.0005 ozt 0.01 dwt 0.2 GN	0.001 g 0.001 dwt	Precision Moisture
GT210E	210 g 1 010 ct 6.7 ozt 130 dwt 3 200 GN	21 000 20 200 13 400 13 000 16 000	4.9 diameter	0.01 g 0.05 ct 0.0005 ozt 0.01 dwt 0.2 GN	0.001 g 0.001 dwt	Precision

* The Movable Fine Range balances (Models GT410DE and GT4100DE) have constant verification scale divisions, "e", but the scale division changes when the lower weighing range reaches its maximum value. Because "e" is constant, the Movable Fine Range balances are not multi-range scales.

Jewelers'/Grain Balance
Digital Electronic
Model: GT Series

Application: The devices may be used in general purpose weighing and in the weighing of semi-precious gems and precious metals. The devices may also be used in the weighing of grain for NIST Handbook 44 applications. The devices, noted in page 2, meet the criteria for FGIS applications.

Identification: The identification badge is located on the left side of the balance.

Sealing: Access to a jumper switch that enables external calibration is located inside the scale. The device may be sealed through the dust cover and a sealing screw, located under the platter.

Operation: In accordance with the marking requirements of NIST Handbook 44, this device is designed for use in the Net Weigh mode. The display indicates only the NET weight and a NET legend appears when a tare weight is entered. The display will indicate GROSS weights when the GROSS legend appears, the tare value is zero, and the NET legend is off.

Before verification by a Weights and Measures Official, the Net Weigh mode must be enabled. Users who do not enable the Net Weigh mode must attach the "Re-zero" label below the key marked "ON" and "->O/T<-".

The GT Series is shipped with grams enabled only. Users who require other approved units of weight must enable the unit and attach the appropriate label to the balance. The grains unit of mass is indicated on the display as "Unit 1". All units, with the exception of the gram unit, must be locked out during the set-up of devices used in FGIS applications.

Test Conditions: The emphasis of this evaluation was on the device operation, marking, and compliance with influence factors requirements. The Models GT410 and GT4100 balances were submitted for evaluation and tested over a temperature range of 10 to 30 °C. The devices were also tested for accuracy over a voltage range of 100 to 130 VAC. Model GT410DE, a movable fine range balance, was also evaluated. The results of these tests indicate that the series complies with applicable requirements.

Type Evaluation Criteria Used: NIST Handbook 44, 1994 Edition

Tested By: A. P. Buie (MD)